



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences

HASANUDDIN UNIVERSITY

24. Geospatial Information Systems

Module Name	:	Geospatial Information Systems
Module Level	:	Bachelor
Code, if applicable	:	23H06130203
Subtitle, if applicable	:	-
Courses, if applicable	:	Geophysics Study Program
Semester(s) in which the module is taught	:	V (Fifth Semester)
Module coordinator(s)	:	Dr. Samsu Arif, M.Si
Lecturer(s)	:	Dr. Samsu Arif, M.Si Aswar Syafnur, S.Si., M.Eng
Language	:	Bahasa (Indonesian language)
Relation to curriculum	:	Elective courses in the third year of the Bachelor of Geophysics program
Type of teaching, contact hours	:	This course is delivered through Lectures (i.e., Project/Case-based learning), complemented by structured assignments (paper review, project/case evaluation) and independent study. Contact hours consist of 150 minutes lectures per week, plus 180 minutes per week for each of the following: structured assignments and independent study
Workload	:	Total workload is 135 hours per semester, consisting of 38 hours for lectures, and 48.5 hours each for structured assignments and independent study
Credit points	:	3 SKS (4.8 ECTS)
Requirements according to the examination regulations	:	Students are eligible to attend the examination if their absences are less than 20% of the lectures
Recommended prerequisites	:	-
Module objectives/intended learning outcomes	:	After completion of this module, students will be able to: CLO 1. Students are able to implement basic geographic information systems and create basic computer-based thematic maps.



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		The following is the mapping of the ILO and the CLO of this course: <table><tr><td></td><td>ILO 7</td><td>ILO 10</td><td>ILO 13</td></tr><tr><td>CLO 1</td><td>✓</td><td>✓</td><td>✓</td></tr></table>		ILO 7	ILO 10	ILO 13	CLO 1	✓	✓	✓																						
	ILO 7	ILO 10	ILO 13																													
CLO 1	✓	✓	✓																													
Content	:	1. Spatial data editing 2. Attribute data editing 3. Basic spatial data analysis 4. Data query 5. Basic thematic maps																														
Study and examination requirements		Participants are marked based on their performance in theory: Case Study (100%) Students are marked based on their percentage of points obtained and based on the following grade scale: <table><tr><th>Percentage of Achievement</th><th>Grade</th><th>Conversion Value</th></tr><tr><td>85 – 100</td><td>A</td><td>4.00</td></tr><tr><td>80 - <85</td><td>A-</td><td>3.75</td></tr><tr><td>75 - < 80</td><td>B+</td><td>3.5</td></tr><tr><td>70 - < 75</td><td>B</td><td>3.0</td></tr><tr><td>65 - < 70</td><td>B-</td><td>2.75</td></tr><tr><td>60 - < 65</td><td>C+</td><td>2.5</td></tr><tr><td>50 - < 60</td><td>C</td><td>2.00</td></tr><tr><td>40 - < 50</td><td>D</td><td>1.00</td></tr><tr><td>< 40</td><td>E</td><td>0.00</td></tr></table>	Percentage of Achievement	Grade	Conversion Value	85 – 100	A	4.00	80 - <85	A-	3.75	75 - < 80	B+	3.5	70 - < 75	B	3.0	65 - < 70	B-	2.75	60 - < 65	C+	2.5	50 - < 60	C	2.00	40 - < 50	D	1.00	< 40	E	0.00
Percentage of Achievement	Grade	Conversion Value																														
85 – 100	A	4.00																														
80 - <85	A-	3.75																														
75 - < 80	B+	3.5																														
70 - < 75	B	3.0																														
65 - < 70	B-	2.75																														
60 - < 65	C+	2.5																														
50 - < 60	C	2.00																														
40 - < 50	D	1.00																														
< 40	E	0.00																														
Exams and assessment formats		Assessment in this course is conducted entirely through case studies, designed to evaluate both theoretical understanding and practical application of geospatial concepts. Students are required to analyze real-world scenarios using fundamental Geographic Information System (GIS) techniques and produce basic computer-based thematic maps. This work is developed																														



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	over several weeks under instructor guidance, culminating in a written report and an oral presentation of results.
Reading list	Main References: 1. Paul A. Longley, Michael F. Goodchild, David J. Maguire, dan David W. Rhind. "Geographic Information Systems and Science". 2. Information Resources Management Association. "Geographic Information Systems: Concepts, Methodologies, Tools, and Applications" 3. Jonathan Campbell dan Michael Shin. "Essentials of Geographic Information Systems" 4. Kang-tsung Chang. "Introduction to Geographic Information Systems" Additional References: 1. Wilpen L. Gorr dan Kristen S. Kurland. "GIS Tutorial 1: Basic Workbook"
Last revision date	July 1 st , 2025